UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,807	02/22/2002	David Bau III	109870-130103	2054

25943 7590 12/29/2006		EXAMINER
SCHWABE, WILLIAMSON & WYATT, P.C.		HOANG, PHUONG N
PACWEST CENTER, SUITE 1900		
1211 SW FIFTH AVENUE	ART UNIT	PAPER NUMBER
PORTLAND, OR 97204	2194	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/29/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/082,807	BAU ET AL.
	Examiner	Art Unit
	Phuong N. Hoang	2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>01 September 2006</u>.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1 - 84</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1 - 84</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1 - 84 are pending for examination.

2.   This office action is in response to the RCE amendment filed 9/1/06.

3.   References, not found in this office action, can be found in previous office action.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out

and distinctly claiming the subject matter which the applicant regards as his

invention.

5.   Claims 12 - 19, 54 - 61 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

        a.   The following language is not clearly understood:

                i.   As to claim 12, it is not clearly what "previously generated proxy"

        means. Applicants argued that the generated proxy in the last office

        action is not previously generated. Examiner could not find anywhere in

        the specification provides the specific meanings of "previously generated

        proxy". Applicant disclosed the proxy is generated by compiler to make

call, and it is just as what examiner cited.   For examination purpose,

examiner just treats it as a "generated proxy" by a compiler, as defined in

the specification.

ii.   As to claim 13 - 19, they are dependent claims of claim 12. They

are rejected for the same reason above.

iii.   As to claim 54, it is the manufacture claim of claim 12. It is rejection

for the same rational as claim 12.

iv.   As to claim 55 - 61, they are dependent claims of claim 54. They

are rejected for the same reason above.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
>
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
>
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
>
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
>
> negatived by the manner in which the invention was made.

7.   **Claims 1- 3, 10 - 11, 43 - 45, 52 - 53 are rejected under 35 U.S.C. 103(a) as**

being unpatentable over Ben-Shachar, US patent no. 6,209,018 in view of

**Arulanthu et al, "Applying C++, Paterns, and Components to Develop an IDL
Compiler for CORBA AMI Callbacks", pages 1 - 13.**

8.   **As to claim 1**, Ben-Shachar teaches a method of specifying an asynchronous
(asynchronous web service, col. 9 lines 25 - 45 and col. 16 lines 1 - 5) service within a
procedural programming environment, the method comprising the steps of:

providing a source code representation of at least a portion of a service logic
(logic, col. 30 lines 65 - 67), a callback method (callbacks, col. 17 lines 35 - 47, col. 25
lines 35 - 45, col. 26 lines 2 - 20), and

a compiler (IDL compiler generate client-side stubs and server-side stubs, col. 2
lines 35 - 65) to generate a client proxy object for interacting asynchronously
(asynchronously) with the client using said callback method (callback to client).

Ben-Shachar does not explicitly teach at least one method (method declarations,
page 8 col. 1 last paragraph) declared to be identifying a member variable declared to
implement said callback method, assign the client proxy object to said member variable.

Arulanthu teaches the callback cause the compiler to generate client proxy to
interact with client (IDL compiler supports asynchronous method invocation callback;
therefore, compiler generates proxy when client makes a asynchronous/callback
method, introduction), at least one method (method declarations, page 8 col. 1 last
paragraph) declared to be identifying a member variable declared to implement said
callback method, and to assign the client proxy object to said member variable (object
reference passed as parameter, page 1 col. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ben-Shachar and Aralanthu's system because Aralanthu's method declarations and member variables would let the callback method able to be called and accessed as the basic programming techniques.

9.   **As to claim 2**, Ben-Shachar teaches wherein said callback method is declared inside a callback interface definition (callback interface, col. 17 lines 42 - 47, col. 25 lines 40 - 45).

10.   **As to claim 3**, Aralanthu teaches specifying one or more declarative annotations (figure 2) associated with said callback method to cause a compiler to generate one or more persistent components to maintain conversational state (maintain state, 3.2.1) related to the identified member variable.

11.   **As to claim 10**, this is the software claim of claim 1. See rejection for claim 1 above. Further, Ben-Shachar teaches a callback interface associated with client (callback interface to client, col. 4 lines 12 - 20, col. 8 lines 14 - 23, and col. 11 lines 20 - 52).

12.   **As to claim 11**, see rejection for claim 2 above.

13.   **As to claim 43**, this the manufacture claim of claim 1. See rejection for claim 1 above.

14.   **As to claim 44 and 45**, see rejection for claims 2 and 3 above.

15.   **As to claim 52**, this the manufacture claim of claim 10. See rejection for claim

10 above.

16.   **As to claim 53**, see rejection for claim 11 above.

17.   **Claims 20 - 23, 25 - 29, 62 - 71 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Arulanthu et al, "Applying C++, Paterns, and Components to

Develop an IDL Compiler for CORBA AMI Callbacks", pages 1 – 13 in view of Ben-

Shachar, US patent no. 6,209,018.

18.   **As to claim 20**, Arulanthu teaches a method for specifying logic within a

procedural programming environment for receiving a callback from an asynchronous

web service (asynchronous web service, col. 9 lines 25 - 45 and col. 16 lines 1 - 5), the

method comprising the steps of:

providing a method (callback method with object reference to a reply handler as

a parameter, page 1 col. 2 on section callback model) associated with said member

variable, the method having signature (signature, section 2, 3.2.2, 3.2.4) containing

logic for receiving said callback (operation(callback,args), figure 2) from said

asynchronous web

Arulanthu does not teach external web service.

Ben-Shachar external web service (multiple servers provide multiple services,

therefore, server 88 can access services of server 54, col. 2 lines 65 - 67, col. 6 lines 17

- 40, col. 9 lines 10 - 45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Arulanthu and Ben-Shachar's system

because Ben-Sharchar's external web service would provide the service to any machine

on any environment within the distributed system via corba service framework.

19.　　**As to claim 21**, Ben-Sharchar teaches the step of wherein the method is

manually provided by a developer (it is the logic of the program).

20.　　**As to claim 22**, Arulanthu teaches the step of wherein the method signature is

provided by an integrated development environment based on a specified service

description file containing a declaration for said callback (section 2, 3.2.2, 3.2.4).

21.　　**As to claim 23**, Arulanthu teaches wherein said method is associated with said

member variable using a method naming convention that utilizes the name of said

member variable and the name of said callback (figure 2).

22.　　**As to claims 25 - 26**, Arulanthu teaches the step of wherein the one or more

declarative annotations are specified within the source code (figure 4).

23.   **As to claim 27**, see rejection for claim 20 above.

24.   **As to claim 28**, Arulanthu teaches the step of wherein the one or more declarative annotations are automatically (code generator, 3.1.2) specified by an integrated development environment based upon input provided by a developer.

25.   **As to claim 29,** Ben-Sharhar teaches the step of wherein asynchronous responses from the external web service are passed to said method associated with said member variable (col. 2 lines 65 - 67, col. 6 lines 17 - 40, col. 9 lines 10 – 45).

26.   **As to claim 62**, this the manufacture claim of claim 20. See rejection for claim 20 above.

27.   **As to claims 63 - 65**, see rejection for claims 21 - 23 above.

28.   **As to claim 66 - 71**, see rejection for claims 25 - 29 above.

29.   **Claims 12 - 17, 38 - 42, 54 - 59, 80 - 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield, US patent no. 6,253,252 in view of Grant, US Pub no. 20020099738.**

30.   **As to claim 12**, Schofield teaches an asynchronous web service, a method comprising the steps of:

receiving a message from a client (receiving the request transmitted from client, figure 8 and associated text and col. 10 lines 10 - 20) requesting that a web service method be invoked;

a callback address (the address for the response, col. 8 lines 23 - 35, col. 10 lines 1 - 10) indicating a location where the client is listening for callbacks from the web service;

storing the callback address in association with a previously generated proxy object (store the routine address in the proxy, col. 9 lines 35 - 40);

invoking the requested web service method (invokes, col. 3 lines 1 - 18).

Schofield does not explicitly teach the steps of parsing the message, storing the callback address in association with a previously generated proxy object.

Grant teaches the step of parsing the message (parse the message, col. 3 [0037] and [0041].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Schofield and Grant's system because Grant's parsing the input message is well known to be necessary for the server to understand the content of the message.

31.   **As to claim 13**, Schofield teaches the steps comprising of:

identifying an instance identifier (identifier, col. 4 lines 1 - 10, and col. 13 lines 11

- 40) provided by the client indicating a particular instance of the client that is listening

for callbacks from the web service; and

storing (store the output parameters which comprises callback address, col. 13

lines 12 - 60 and col. 9 lines 55 - col. 10 lines 20) the instance identifier in association

with the callback address and the proxy object.

32.   **As to claims 14 and 15**, Schofield teaches the step comprising of wherein at

least one of the callback address and the instance identifier is encapsulated in one or

more request messages (each request has an identifier, col. col. 4 lines 1 - 10, and col.

13 lines 11 - 40).

33.   **As to claim 16,** Schofield modified by Grant teaches the step of wherein at least

one of the callback address and the instance identifier is encapsulated in one or more

SOAP message headers (Grant; SOAP message headers, [0037] and [0276]).

34.   **As to claim 17**, Schofield teaches the step of wherein the instance identifier is a

GUID (identifier is unique, col. 4 lines 1 - 10, and col. 13 lines 11 - 40).

35.   **As to claim 38**, Schofield teaches a web service, a method comprising the steps

of:

Receiving by the server a message (server is inherent in client-server

environment for receiving the message transmitted from client-side, col. 10 lines 10 -

15) identifying a callback address (the object address call's input parameters, col. 9

lines 55 - col. 10 lines 35) including a callback method (object's method to be called),

and a proxy object identifier (proxy handle);

determining on one or more computing device (machines, col. 5 lines 20 - 65) a

method to be invoked based at least in part upon the proxy object identifier (determined

by proxy handle) and the callback method (used input parameters and carried out the

request), and

routing the calling the method to be invoked (inherent when call the appropriate

method).

Schofield does not explicitly teach extract the message.

Grant teaches the step of extracting the message (extracting in parsing process,

col. 3 [0037] and [0041].

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Schofield and Grant's system because

Grant's parsing the input message is well known to be necessary for the server to

understand the content of the message from the sender format.

36.   **As to claim 39**, Grant teaches the step of wherein the callback address

comprises a URL (URL, 0267) indicating a location where the web service listens for

callbacks from the external web service.

It would have been obvious to one o of ordinary skill in the art at the time the invention was made to recognize that the web address would comprise the URL.

37.   **As to claim 40**, Schofield teaches the step of wherein the callback address includes proxy object identifier (col. 9 lines 35 – 40).

38.   **As to claim 41**, Schofield teaches the step of wherein the message further identifies a callback instance identifier (call identifier, col. 8 lines 35 - 45 and col. 13 lines 25 - 35).

39.   **As to claim 42,** Schofield teaches the step of wherein routing further comprises identifying a callback instance based at least in part upon the callback instance identifier (specified object to be called, col. 9 lines 55 - col. 10 lines 10); and routing the request to a method associated with the identified callback instance.

40.   **As to claim 54**, this is the article claim of claim 12. See rejection for claim 12 above.

41.   **As to claims 55 - 59**, see rejection for claims 13 - 17 above.

42.   **As to claim 80**, this is the article claim of claim 38. See rejection for claim 38 above.

43.   **As to claims 81 - 84**, see rejection for claims 38 - 42 above.

44.   **Claims 30 - 32, 35 - 36, 72 - 74, 77 - 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield, US patent no. 6,253,252 in view of Ben-Shachar, US patent no. 6,209,018.**

45.   **As to claim 30**, Schofield teaches a web service, a method comprising the steps of:

generating by the device a request (call from client through the internet, col. 10 lines 50 - 65 and col. 4 lines 65 - 67) to a web service using a proxy object (compiler produced client stub object, col. 7 lines 25 - 40), previously generated by a compiler based upon a service description file (source file 101, col. 7 lines 10 - 60), wherein the request includes a callback address (containing address, col. 10 - lines 1 - 10 and col. 12) to identify a location to which the external web service should return a response,

transmitting on one or more computing devices, (machines, col. 5 lines 20 - 65) the request as a request message to the external web service using

one or more transmission protocols (network protocol, col. 6 lines 14 - 17) and

receiving on one or more computing devices, (machines, col. 5 lines 20 - 65) an asynchronous response from the external web service (a response is returned to client, col. 11 lines 20 - 30 and col. 8 lines 18 - 22).

Schofield does not explicitly teach that the description file associated with the external web service, and the request is from a server. However, Schofield teaches the description file is compiled and linked to client and server (col. 7 lines 10 - 60).

Ben-Shachar server access external web service (multiple servers provide

multiple services; therefore, server 88 can access services of server 54, col. 2 lines 65 -

67, col. 6 lines 17 - 40, col. 9 lines 10 - 45).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Schofield and Ben-Shachar's system

because Ben-Sharchar's external web service would provide the service to any machine

on any environment within the distributed system via corba service framework.

46.   **As to claim 31**, Schofield teaches the step of wherein the callback address

includes proxy object identifier (store address in the proxy, col. 9 lines 35 - 40).

47.   **As to claim 32**, Schofield teaches the step of wherein the callback address is

included within one or more headers of the request message (header file 119, col. 7.

lines 40 - 50).

48.   **As to claim 35**, Schofield teaches the step of a callback instance identifier

representing a specific instance of the requesting web service to which asynchronous

responses are to be routed (asynchronous response, col. 8 lines 45 - 65).

49.   **As to claim 36**, Schofield teaches the step of wherein and the callback instance

identifier is included within one or more headers of the request message (header file

119, col. 7. lines 40 - 50).

50.   **As to claim 72**, this is the manufacture claim of claim 30. See rejection for claim

30 above.

51.   **As to claims 73 - 74**, see rejection for claims 31 - 32 above.

52.   **As to claims 77 - 78**, see rejection for claims 35 - 36 above.

53.   **Claims 33, 34, 37, 75, 76, 79 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Schofield, US patent no. 6,253,252 in view of Ben-Shachar, US

patent no. 6,209,018, and further in view of Grant, US Pub no. 20020099738

54.   **As to claim 33**, Schofield and Ben-Shachar does not SOAP message.

Grant teaches the step of wherein the request message is a SOAP based

message (soap message, fig. 3).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teaching of Schofield, Ben-Shachar, and Grant's

system because Grant's SOAP message would provide a well-known protocol to

transfer the request through the internet.

55.   **As to claim 34,** Grant teaches wherein the callback address comprises a URL

(url, [0267]) identifying a location where the web service is listening for a response from

the external web service.

56.   **As to claim 37**, see rejection for claim 33 above.

57.   **As to claims 75, 76, and 79,** see rejection for claims 33, 34, and 37 above.

Allowable Subject Matter

58.   Claims 4 - 9, 18 - 19, 46 - 51, 60 - 61 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Phuong N. Hoang whose telephone number is

(571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to

5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on 571-272-3718. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ph
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